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ABSTRACT

This thematic issue is made up of papers by practicing administrators and university personnel on the topic of cooperative learning. The following articles are included: (1) "The Cooperative Learning Environment: Restructuring without Rebuilding" (Harvey C. Foyle and Lawrence Lyman); (2) "The Role of the Administrator When Adopting Cooperative Learning as an Innovation in School Improvement" (Gerald D. Bailey and Norma Dyck); (3) "Administrative Concerns with the Implementation of Cooperative Learning" (Dan R. Flummerfelt); (4) "Using Cooperative Groups in the Teacher Education Classroom" (Thomas O. Erb); (5) "Jigsaw with Mature Students" (William Samuelson); and (6) "How Do You Evaluate Students Working in Cooperative Learning Groups?" (John Myers and Jackie Dippong). (JD)

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COOPERATIVE LEARNING I

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COOPERATIVE LEARNING — PART I
ADMINISTRATION/UNIVERSITY

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All submissions should conform to the editorial guidelines of the RECORD. For a copy of the guidelines, contact the editor. All submissions will be reviewed and edited.

EDITOR'S COMMENTS

Harvey C. Foyle

This thematic issue of the *KASCD RECORD* contains part one of a two-part series on Cooperative Learning. The information was presented at the Phi Delta Kappa Fall Leadership Institute on Cooperative Learning in Topeka, Kansas, on September 22 and 23, 1989. A wide variety of presenters shared many different types of Cooperative Learning approaches for varied target populations.

Cooperative Learning I incorporates the presentations that related to administrators and university persons as well as the keynote address. Cooperative Learning II will incorporate those presentations that related to classroom teachers and lessons.

We hope that the expertise of Kansas educators can be shared in this journal. You are welcome to contact any of the practitioners who are published herein.

GUEST EDITOR'S PERSPECTIVE

Lawrence Lyman

Cooperative learning can become a viable part of the school structure only when the teachers and other adults who facilitate cooperative learning are able to experience the benefits of cooperative interaction in their relationships with colleagues and administrators. A key factor in the success of cooperative learning, therefore, is the experiences and opportunities afforded teachers by university preparation and graduate programs and by their administrators to experience and practice cooperation. The articles in the *KASCD RECORD* provide perspectives and ideas from practicing administrators and university personnel who suggest practical strategies for encouraging cooperation among adults.

Meaningful restructuring of our schools requires an examination of the ways in which power is distributed in our schools and thought about how the human needs of educators can be met. Teacher preparation programs must prepare teachers for collaboration with other educators, with parents, and with students in the planning, implementation, and evaluation of instruction. Administrators must encourage teacher collaboration and facilitate positive interaction among teachers as they work together to improve the schools. These articles help us get started with this process.

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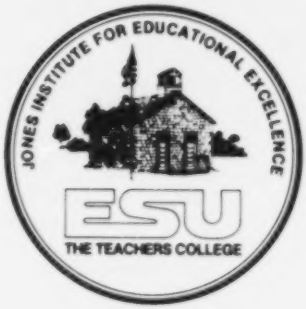

for
The Kansas Association for
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PRESIDENT'S MESSAGE

Dr. Gary Marshall

COOPERATION OR COMPETITION

School administrators who endorse the concept that schools should prepare young people to live in a competitive society need to reexamine that belief. A school system that glorifies competition will, almost certainly, fail to prepare its students to live effectively in the modern world which is cooperative and interdependent.

Competition only motivates those who believe that they can win. Everyone else becomes discouraged and is satisfied to sit back and watch those few work like crazy. Adults and children who believe they cannot win are quite willing to let others make the effort. On any given Friday night people who need exercise attend a basketball game to watch twenty or so players who don't need exercise get it.

Competition can create an atmosphere of win at all costs. That results in children playing dirty, cheating on tests, or whatever else is necessary to win or get that good grade.

Competition does have a place in society but it must occur in a situation where all those competing feel that they have a chance to win.

The fact that the world has better communication technology has led to the development of a cooperative society. Today a message can be sent around the world in five seconds. We depend on people we do not even know for our food and clothing. Cooperation occurs constantly in the work place and our homes. Competition occurs only rarely.

Administrators need to recognize that children must be taught how to cooperate with others because that will be the method used by them to succeed at most of the tasks they undertake during their lives.

Cooperative learning strategies allow all children to succeed and feel good about themselves. The child develops the ability to like and work with a variety of individuals.

School administrators must lend their support to teachers who desire to be trained to use cooperative learning as a teaching strategy. In order to support

teachers who use cooperative learning procedures, the administrator needs to provide continuous, immediate, in-class assistance in perfecting teachers' competencies. Johnson and Johnson (1984) stated that to do this the administrator must recognize the basic principles of mastering a new instructional strategy, be able to differentiate effective from ineffective implementation, give up the individualistic perspective on supervising, understand the purposes of professional support groups, and know how to structure and manage a professional support system.

In summary, cooperative learning is an effective strategy to use in the classroom. Guskey (1990) emphasizes that cooperative learning, critical thinking, ITIP, TESA, mastery learning, and learning styles can all be integrated into an improvement model that will positively influence different aspects of teaching and learning.

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EXECUTIVE SECRETARY'S PERSPECTIVE

Anita Pankake

COOPERATION—GOOD FOR THEM, GOOD FOR US!

What requires positive interdependence, face-to-face interactions, individual accountability and appropriate use of interpersonal and small group skills?

For those familiar with the literature on cooperative learning, the response would be a cooperative learning group. These are, in fact, the "four basic elements" which Johnson, Johnson, Holubec & Roy (1984), in their book *Circles of of Learning: Cooperation in the Classroom*, state must be present for students to cooperate in small groups. Without these basic elements other activities such as materials preparation, grouping procedures, or content presentations will merely result in students working in groups rather than in cooperation.

While these elements are essential to the successful implementation of cooperative learning with students, they also are important for the development of a cooperative professional environment. English (1986, p. 26) noted that "Schools can be simply collections of teachers doing their own thing, or integrated agencies aimed at accomplishing common purposes. To achieve the later, the elements of interdependence, interactions, accountability and human relations skills must be in place. Asking, urging, or commanding educational professionals to use cooperative learning with students when total school and district operations are not based on these same four elements seems to form a strong case for the maxim "do as I say, not as I do."

This issue of the *KASCD RECORD* deals with cooperative learning generally, and with administrative issues associated with cooperative learning, specifically. As you read these articles, consider the need to implement cooperative strategies in working with professional staff and in guiding organizational operations at the same time that we are trying to create a spirit of cooperation among students. Adopting and adapting the basic elements of cooperative learning in our work as educational professionals allows us to employ one of the most powerful teaching strategies available — modeling. The development of cooperative behaviors and values in our students can be more easily facilitated if we are able to say "do as we do."

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THE COOPERATIVE LEARNING ENVIRONMENT: RESTRUCTURING WITHOUT REBUILDING

This article is adapted from the keynote address by Harvey Foyle and Lawrence Lyman at the Phi Delta Kappa Fall Leadership Institute on Cooperative Learning, Topeka, Kansas, September 22, 1989.

"When students say they hate school a lot of what they are saying is that they hate being asked to work hard at something they don't value." - William Glasser

Introduction

According to Glasser (1986), students' motivation to work in school is dependent on the extent to which the students' basic psychological needs are met. Many teachers would agree that significant numbers of students are not putting forth much effort.

Hodgkinson (1985) and others have predicted that changes in the demographics of the student population will have a major impact on the schools of the future. The schools of the future will teach a larger second language population, more minority students, and more latch-key students. Because many students are not currently working up to their potential, it is unlikely that traditional teaching strategies will meet the diverse needs of students in the future.

The problem for education, now and in the future, is to restructure the learning and working environment of the school so that all or nearly all students become actively involved in their own learning and responsible for their own learning. This must be accomplished in an era of limited resources, declining public support, and increasing student indifference. Schools, therefore, must be restructured and not rebuilt.

The Current Environment

In most schools, students are placed in settings which ask them to learn individually, competitively, and/or in ability groups. These traditional learning environments motivate some students. However, as many as fifty percent of the students remain unmotivated (Glasser, 1986). Even in the best of schools, then, a significant number of students are observers and not participants in their own education.

When students are asked to learn by themselves in a non-interactive environment, motivation to learn declines for a large number of those students. Isolated and alone, the students perform the minimum requirements to complete their learning tasks. Some students become frustrated and withdraw mentally or physically from their learning environment. (Bronfenbrenner, 1986; Dorman and Wheelock, 1988)

When students are asked to learn aggressively in a competitive environment, students become more concerned with beating others rather than learning for themselves. Competing for teacher attention, peer approval, and tangible rewards such as grades, becomes the educational goal of the student. As Kohn (1986) points out, "...trying to do well and trying to beat others are two different things" (p. 55).

When students are placed in groups according to their perceived ability, student performance can decline. Student attitudes toward school and teacher expectations for student success can be negatively affected (Winn & Wilson, 1983). Harp (1989) indicates that student self-concept and student interactions between the ability groups can also be negatively affected. Berliner (1985) observed that the pace of instruction, response opportunities, and teacher praise are less prevalent in low-ability groups. Students in lower ability groups are often more criticized as well.

Oakes (1985) suggests that the problems of ability grouping are accentuated by the tracking of students into specific ability groups that are maintained for long periods of time. The amount of time for learning and the quality of instruction for students in lower ability tracks is less than that for students in higher ability tracks.

These conclusions about ability grouping are particularly disturbing in the light of Slavin's (1988) conclusion that "...the effects of ability grouping cluster closely around zero for students of all achievement levels." Ability grouping appears to cause serious concerns without the resulting benefits in student achievement.

Students are currently placed in individual, competitive, and ability-grouped environments that motivate some students but not others. Is there a way to restructure the learning environment so that those students who are currently learning continue to do so and those students not taking responsibility for their learning begin to do so?

Restructuring, not rebuilding

School buildings do not need to be rebuilt. School rooms do not need to be remodeled. Teachers do not need to be replaced. What needs to occur is the retraining of teachers and administrators so that they are able to promote a positive learning environment that encourages cooperation between students and collaboration between teachers and administrations.

Studies have consistently found that cooperative learning promotes increased academic achievement. Cooperative learning is relatively easy to implement when appropriate restructuring takes place. Cooperative learning, also, involves minimal expenses. Cooperative learning helps students at every academic level to feel successful and productive in class. In cooperative learning teams, low achieving students can make contributions to a group and experience success, while all students can increase their understanding of ideas by explaining them to others (Harvard, 1986).

Cooperative learning is a teaching strategy involving students in small group learning activities that promote positive interaction. Cooperative learning is one of the most thoroughly researched strategies available to educators. Because of the many documented benefits of cooperative learning, administrators and supervisors should encourage the use of this methodology by teachers. Further, cooperative learning is an ideal methodology for use by administrators and supervisors in staff development activities with teachers.

Because of the widely researched and proven benefits of cooperative learning, administrators and supervisors will want to encourage its use as a teaching strategy in the classrooms they supervise. As Charles (1989) indicates, "Despite the well documented advantages of cooperative learning, it would defy common sense to conclude that all learning occurs best through the cooperative mode." Yet, the advantages of cooperative learning clearly mandate its consideration as a strategy to be used in conjunction with other methodologies in the classrooms of the 1990s.

It is unrealistic to assume that the benefits of cooperative learning can be attained in an unsupportive environment. As the teaching methodology changes so must the learning environment, teacher planning, expectations for student success, and staff relationships change.

The changing environment

For the student, the classroom environment must change. Every student must take more responsibility for his/her own learning. At the same time, the student must take responsibility for the success of other students in the learning environment. The success of the classroom is judged by the progress of all the students in that environment. This is how society should work!

In the traditional classroom, individual student achievement has been the primary criterion of success. However, in an interactive classroom environment the criteria for success changes. Not only is achievement important but the self-concept of all students, group process skills, and communication skills are equally important. For the low achieving student, achievement can increase when the student begins to feel a part of a group and gains increased self-esteem. Peer acceptance is a critical factor in promoting this growth in self-esteem for many students, particularly adolescents.

Traditional learning environments that include individualistic learning, competitive learning, and/or ability group learning promote indifference and lack of concern for other students or place students in adversarial relationships. These relationships are counter-productive to the achievement and self-esteem of some students. The classroom can become a battlefield of self-interest where the less aggressive and less committed student can become a casualty. Higher achieving students do not gain an expertise in interpersonal relationships, communication skills, or group processes.

Teacher planning and teacher expectation

Traditionally, teacher planning has focused on cognitive (content) objectives. To change the learning environment, the teacher must begin to plan for change. This planning now includes affective outcomes, skill outcomes, and group outcomes. From the beginning of the school year, the teacher attempts to focus the new class so that it will achieve the teacher's priorities. In order to change the learning environment, the classroom focus must be expanded to include group processes and skills. The building of an interactive environment that supports cooperation and collaboration will take an investment of additional time and effort on the part of the teacher.

Research has shown that teacher expectations for student success are critical. Student achievement, classroom management, creativity, and student self-concept are all affected by the teacher's view of each student in the

classroom. The teacher must expect that low achieving students can achieve if the environment of the classroom becomes cooperative. The teacher must, also, expect that cooperation will positively affect all students including those students who are presently achieving at a satisfactory level.

Building the classroom group

Some would argue that time spent letting students get acquainted with each other is of little practical value. To promote a cooperative environment, however, teachers need to help students "get to know one another." This is especially important for students of different social, ethnic, and religious backgrounds. Thus, one of the first tasks in building a cohesive classroom *group is to let the students get to know one another in a positive, successful* atmosphere. Students who join the group as the year goes on must be integrated into the group.

At the beginning of the year, or when a student first comes to the classroom, a sense of belonging is promoted. The student begins to feel comfortable and accepted in the classroom so that student ownership of the group and its goals is fostered.

In the process of becoming acquainted and building a sense of belonging to the group, interactive skills are taught. These skills include: communication, active listening, appropriate participation, shared decision-making, and commitment to the group. While group processes are taught, individual accountability must also be maintained to assure that the student actively participates and does not become overly dependent on the group.

As students learn interactive skills and experience success in the group, a social support network is built. Students are no longer isolated individuals or competitive adversaries but teammates who can turn to one another for support and who have responsibility for the overall success of the class.

This responsibility, previously held solely by the teacher, is now shared by the entire group. The teacher, therefore, must be willing to appropriately delegate responsibility and power to students. In doing so, the teacher will experience fewer classroom management and discipline problems. The classroom atmosphere becomes more positive and rewarding for all.

Restructuring staff relationships

If cooperative learning is to be implemented effectively by teachers, it must also be considered as a strategy in the staff development experiences that

seek to encourage professional growth and development in the teaching staff. Teachers must be actively involved, with administrators, in cooperatively choosing the goals, desired outcomes, and delivery systems for staff development. As Welsh (1986) pointed out, "Until now, the 'experts' have owned educational reform. However, the best judges of what needs to be done are communities, teachers, families, and the kids themselves." The administrator, therefore, must be willing to delegate appropriate power to others and have the skills to do so effectively.

The premise that learning is taking place when quiet, orderly, and noiseless classrooms are dominated by "teacher talk" is challenged by the realities of the students who now attend our schools and those who will attend in the future. Administrators have been increasingly held accountable for the performance of students and teachers in the schools they manage. Therefore, administrators must begin to use collaborative processes to restructure the schools they manage in order to meet the needs of their staffs.

Too often, staff development programs for teachers have the same drawbacks as the traditional quiet, "expert talk" dominated classrooms described earlier. Teachers are often forced to listen while "experts" who they have had little say in choosing suggest changes and innovations the teachers are to implement. Follow-up, if any, is often directed at measuring how the innovations have been implemented, rather than at cooperative planning by teachers and administrators.

Ideally, in-service would often involve teachers in small, heterogeneous groups working together. Staff development would be initially planned and developed with teacher input, and then promote the active involvement of the staff in the in-service experiences which accompany that program. Opportunities for teachers to get acquainted with each other, to share experiences, and to collaborate on strategies for helping students would be a key part of such staff development programs.

Another important feature of staff development should be that it provides teachers with the opportunity to network with other professionals who share their needs. Too often, staff development perpetuates teacher isolation rather than diminishing it. Individual accountability, an important component of cooperative learning, can be monitored by peers, supervisors, and administrators who help each teacher develop realistic goals for improvement and assist the teacher in meeting those goals. The teacher would also have a network of colleagues to assist in problem-solving, in developing further goals, and in sharing and celebrating successes.

By restructuring staff relationships, allowing teachers to have appropriate input into their professional development, encouraging collaborative relationships between staff members, and involving staff members in appropriate decision making, the administrator creates the necessary environment in the school for cooperative learning to flourish. Staff members who experience the benefits of collaboration will be more likely to encourage successful cooperation among their students.

Group-building

Teachers and administrators can restructure their classrooms and schools to encourage cooperation and collaboration. We believe that the most important initial factor in promoting positive interaction is group building; that is, creating a cohesive group that functions positively and productively to accomplish tasks. Group building requires an investment of time and energy, but pays dividends in harmonious group functioning and increased productivity.

Without planned activities to build group cohesiveness, even the most carefully planned cooperative learning activities can fail. Group building activities are beneficial to any group which needs to function effectively. By beginning such activities in preschool classrooms, a foundation for cooperation can be constructed within school and throughout life. If students become accustomed to cooperative learning in their first experiences in school, group building in later school years should be easier, more familiar, and less stressful for students, teachers, parents, and administrators.

In order to build group cohesiveness and create productive working relationships between group members, specific group building activities must be done as the group begins to work together and throughout the group's working relationships. Group building activities must be designed to promote success so that both individuals and the group come to believe that success can be achieved through the efforts of groups working together.

Group building activities promote positive feelings between group members and create a positive atmosphere which encourages further group efforts. These activities may encourage an appreciation for the importance of the mission, task, or subject matter the group will work on together.

As they work together on group building tasks, group members develop an appreciation for the differences individuals bring to the group. These

differences may include personality traits, experiences, socioeconomic differences, cultural differences, religious differences, and gender differences. Group members can learn how different problem-solving approaches, different priorities and values, and different aptitudes and skills of the group members can assist the group as it works together. Group building activities also give individuals a feeling of self-worth and encourage individuals to see their contributions and ideas as worthwhile to the group. In this way, individuals who would not usually contribute in group settings are encouraged to do so. Group building activities also help group members identify how other group members may help them and encourage group members to seek help from others and to provide help to others.

Skills needed for productive interaction are also developed in group building activities. These skills include: communication and listening skills, interactive skills, trust and acceptance skills, and group support skills. It is important to realize that group members, even adult group members, do not necessarily bring the skills needed for successful cooperation to the group and that attitudes and habits of individuality and competition must be overcome so that group members can collaborate effectively for the benefit of the group.

Summary

Traditional instructional strategies have stressed individual learning, competition, and ability grouping. These strategies have been effective for some students, but many students have not been motivated to work to their potential. Indicators suggest that the number of students not served by these traditional teaching methods will probably increase in the future.

Cooperative learning, used appropriately, offers an alternative instructional strategy that can be incorporated into the teacher's repertoire of instructional methods. It is more likely that teachers will use cooperation more appropriately and successfully when they experience opportunities to collaborate and when such collaboration is actively encouraged by administrators.

Individuals do not necessarily bring the skills and attitudes necessary for successful cooperation to the group—they must be built by the leader. The success of cooperative learning is affected by the amount and degree of group building that takes place prior to and during the implementation of cooperative learning. As students experience success in group settings, their appreciation for others, attitudes toward school, and achievement are positively affected.

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THE ROLE OF THE ADMINISTRATOR WHEN ADOPTING COOPERATIVE LEARNING AS AN INNOVATION IN SCHOOL IMPROVEMENT

In these challenging and exciting times of school improvement, administrators find themselves developing new behaviors as instructional leaders (Behling, 1981; Curran, 1982; Kelley, 1981; Miller, 1982; Shoemaker & Fraser, 1981). In this new role, many administrators recognize that they must have highly refined skills for implementing innovations related to school improvement (i.e. cooperative learning) in their building and district. Questions like: (1) where do I begin? (2) how do I proceed? and (3) what strategies do I use to accomplish change? can be overwhelming to administrators. To answer these questions, the administrator must remember that successful adoption of innovations such as cooperative learning is directly related to his or her knowledge about staff development. Wood (1989) has suggested that designing effective school-based staff development programs should result from school improvement goals, research, and effective practices. His research as well as the research of others (Caldwell, 1989) has been translated into a plan that encompasses five stages. In each stage, there are numerous questions and decisions which must be made by the administrator. The five stages include: (1) Readiness—Studying, Selecting, and Making Commitment, (2) Planning—Strategic/Interactive and Long Range Planning, (3) Training—Inservicing Audience using Principles of Adult Learning, (4) Implementation—Modeling, Practice and Application with Appropriate Feedback and Coaching and (5) Maintenance—Practice and Application with Monitoring Involving Coaching Which Insures High Level of Proficiency and Usage.

Administrators who are implementing or contemplating implementation of cooperative learning in their buildings need to be able to identify the stages and corresponding questions that should be addressed in staff development. The following items suggest those questions that should be addressed:

STAGE 1: READINESS

Vision

1. What is the vision for school improvement in your school district?
2. Who owns the vision?
3. How does cooperative learning and other innovations relate to the vision of school improvement?

Information

1. What kinds of information do these teachers need about cooperative learning (e.g. theory, research, practice information, etc.)?

2. What kinds of information will need to be disseminated based on the different stages of awareness and interest?

3. What proportion should be research-based and what proportion should be practitioner-based?

4. At what depth should this information be (e.g. awareness level, indepth level)?

5. What do the stakeholders need to know about change and the change process?

Recruitment

1. Should all teachers or select teachers be recruited for participation?

2. What process of recruitment should be used (who should be chosen and on what basis)?

Awareness and Orientation for Stakeholders

What kind of information do stakeholders need?

—parents

—school board members

—support staff

Commitment: Staff

1. What are we committed to in terms of cooperation and cooperative learning?

2. Who will be involved?

3. How can we demonstrate this commitment (e.g. symbolically through written or verbal commitment)?

Commitment: Administration

1. What resources are needed by faculty (e.g. time, space, monies, etc.)?

2. What support system(s) are needed by faculty to be successful?

Decisions

1. Which cooperative learning model should be used (e.g. Johnson & Johnson, Slavin, or a hybrid model)?

2. How will teacher evaluation be tied to the supervision of teachers using cooperative learning?

3. How will cooperative learning impact school policy—specifically school grading policy, discipline policy, and homework policy?

STAGE 2: PLANNING

Interactive/Strategic Planning/Action Plans

1. What are the goals related to cooperative learning?

2. What are the criteria for achieving those cooperative learning goals (e.g. increased student achievement scores, student attitudes, teacher morale, improved interpersonal relationships etc. ?

3. Who is responsible for leading the group to achieve these goals?

4. Who do the group leaders report to?

5. How will these goals be evaluated?

6. What tools will we use to evaluate goals?

7. What dates/timelines are involved to achieve these goals?

8. What resources are needed to accomplish these goals?

STAGE 3: TRAINING

Audience

1. Who is involved in the cooperative learning training?

2. Who should be included in the audience (e.g. teacher and/or administrator)?

3. What is the nature of the training programs (e.g. Joyce and Shower's Stages of Training)?

Training Program Content and Delivery Systems

1. What components of the cooperative learning model will be targeted for the training program?

2. In what sequence will these concepts be presented?

3. What delivery system (methodology) will be used by the trainers(s) to present the information?

Trainers

Who will become the cooperative learning trainer(s) (e.g. classroom teacher, administrator, consultant, etc.)?

Training Support Systems (Safety Net)

How can staff support each other during training sessions (i.e. Support Groups, Peer Coaches, etc.)?

STAGE 4: IMPLEMENTATION

Support

How can the teachers be supported during the cooperative learning implementation period?

Recognition

1. What are the rewards which can be used to recognize teachers?

2. How can teachers be reinforced for their work?

Review

When and how does the administrator review the goals and process of the strategic plan to assess adequate effectiveness and progress?

Supervision

Who will assist teachers with feedback concerning progress of cooperative learning (e.g. peers, administrators, support groups, consultants)?

Resources

1. What materials will teachers need to implement cooperative learning?
2. What amount of time will be needed by teachers?

Leadership

What are the various roles of the administrator during the different time periods?

STAGE 5: MAINTENANCE

Supervision

How will administrator(s) provide assistance to teachers?

Monitoring

To whom will teachers report progress and problems?

Self-Monitoring

How will teachers engage in self-analysis dealing with cooperative learning?

Shared Responsibility

1. How can groups share responsibility for continued use of cooperative learning?
2. How can evaluative feedback be used to modify cooperative learning as an innovation in the building and respective teachers in that building?

CONCLUSION

First, understanding and using Wood's five stages of staff development as a "jumping-off point" for implementing cooperative learning can be extremely helpful to administrators who see themselves as instructional leaders. Second, the research-based staff development model allows administrators to ask the "right kinds of questions" as they work their way through the adoption of cooperative learning as an innovation in the building and school district.

Third, administrators must recognize that the answers to each question can and will be different depending on the climate, culture, and history of that school building and school district. Fourth, administrators must recognize that questions raised in each individual step may need to be addressed again in subsequent steps. Answers to a question in one step may change or need to be restated in subsequent steps. In the main, an awareness for the need to address and answer the questions in a systematic fashion will help administrators move closer to assuming a strong image of a instructional leader and move us closer to institutionalizing cooperative learning in our nation's classrooms.

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ADMINISTRATIVE CONCERNS WITH THE IMPLEMENTATION OF COOPERATIVE LEARNING

As a practicing administrator one of the greatest frustrations I have faced has been with the whole process of staff awareness, training, practice, and implementation of new ideas. We in the education in-service business have grown accustomed to the traveling Dr. Feelgood mentality of staff development. We have someone present information to our staff that sounds good, makes sense educationally, and leaves us in a state of psyched-up euphoria. We leave the auditorium after the presentation with great ideas and wonderful intentions. But in truth, we usually file our notes of great ideas, try to use one or two of our new techniques or practices (most of us have our Harry Wong potty pass toilet seats somewhere), and then they are mostly forgotten in that wasteland of educational training memorabilia we all store in the recesses of our minds, files, and closets.

Three things have changed me personally in how I view professional in-service at present. First, I was exposed to Madeline Hunter and the tenets of effective instruction. She helped develop a common language whereby educators could systematically break down and discuss classroom instruction. Teaching and learning could be analyzed through a process of awareness, training, practice and feedback, and implementation. In fact the whole key to its success relied upon teachers and administrators and more importantly teachers and teachers dialogue about effective teaching practices (the art and science). Secondly, I became aware of the research of Dr. Bruce Joyce and Dr. Beverly Showers on effective in-service practices. Their research validated my concern that most in-service training we as educators receive was short-term motivated and mostly ineffectual. If we do not create in-service programs that have staying power, we are primarily wasting the time and money of everybody involved. We have to create a learning climate that is, first of all, motivational, then practical, and finally doable for our staffs. If the staff becomes aware of a teaching strategy, idea, or practice that is validated by research and supported by their administration they can proceed to level two of staff training. At the training level they gain specific knowledge and expertise in how to do something. Once they have these skills they are honed through practice, feedback, more practice, more feedback, until it is a part of their teaching repertoire. It is not until it has been systematically practiced that it becomes natural and most effective. The failure of most in-service training lies at this stage. We are not encouraged or facilitated to develop new skills or expertise because we do not spend the time,

money, or energy to practice. We need to develop a cadre of teachers or colleagues who learn and practice together.

A strategy of instruction is thesetting up of a network of professionals who help each other by practicing, giving feedback, fine tuning, and practicing more until it is like we want it and we are comfortable with it. What do we gain? A staff of committed, less alienated or insulated colleagues who care more about effective teaching and each other. Their esteem and satisfaction are enhanced through increased professional competence. Finally, I fully subscribe to the philosophies of Dr. William Glasser that supported practices he believed were effective. These ideas were from his Schools Without Failure and Reality Therapy writings and seminars. His latest, Control Theory in the Classroom rang even truer for me. Dr. Glasser supports, along with many, many others the practice of cooperative learning. He feels that cooperative learning is a way for students to satisfy their need for belonging and a sense of importance. Cooperative learning is seen as one more powerful vehicle for getting to some of the places we are all trying to get, places like improved interpersonal relations, critical thinking, and higher test scores. What research supports this practice? I offer just some of what I call the mounting validation by researchers:

1. Active engagement increased from 28% to 78% of the class period with peer tutoring (Delquadri, 1986).

2. 29 of 35 studies showed students in teams gained significantly more in achievement than in traditional classrooms (Slavin, 1986).

3. Cooperative learning increased students' self-esteem (Johnson and Johnson, 1986).

4. Students showed increased cooperativeness and altruism (Slavin, 1986).

The research, and this is a very small tidbit of that being done, is impressive. But cooperative learning groups also have some key components that identify them: positive interdependence, heterogeneous makeup, and a dual emphasis on interpersonal skills as well as academic achievement. What does all of this have to do with teaching, in-service models and philosophies of learning? To me it is obvious. If cooperative learning is good for kids it is good for us, too. To quote Glasser, learning with others is not only in the spirit of the model, it is the model.

How do you implement cooperative learning most effectively in a building? I am not sure, but the model presented by Johnson and Johnson in their

book *Circles of Learning* has been effective for me. I will attempt to summarize some of their recommendations.

Teachers do not become proficient in using cooperative learning procedures from attending workshops or reading a book. Teachers become proficient and competent from doing. For teachers to develop the expertise in cooperative learning procedures they need to structure cooperative lessons routinely without difficult planning or thought. This comes about through the use of cooperative learning procedures regularly over an extended period of time. They also need to jointly reflect on their experiences, doing so with supportive and interested colleagues. This is best done by developing a building professional support group whose goal is to promote the continuous growth in competence in using cooperative learning. This group provides continuous and immediate:

a. Feedback on quality of implementation.

b. Assistance in development of lessons and materials.

c. Help in solving problems and overcoming barriers.

Administratively there are some how-to's connected to getting support groups functioning and in place. Some of the steps recommended by the Johnsons include:

1. Publicly announce your support for the use of cooperative learning procedures.

2. Recruit and select teachers to participate in the professional support groups.

3. Inform them of (or review with them) the nature of cooperative learning.

4. Highlight the goal of interdependence among members of a professional support group.

5. Negotiate a contract among the members of the professional support groups and a contract between the professional support groups and you, if appropriate.

6. Structure the first few meetings of the professional support group until members are able to structure them by themselves.

7. Provide the resources and incentives needed for the professional support groups to function.

8. Ensure that the professional support groups discuss how well they function and maintain good relationships among members.

9. Build yourself in as a member, not out as a consultant.

10. Keep a long-term, developmental perspective and protect the professional support groups from other pressures.

The Johnsons and I conclude by stating that structuring teachers into professional support groups can have important effects on teacher morale as well as on their competence in using cooperative learning procedures. There is a deep human need to collaborate and build personal relationships with supportive peers. Building collaborative and supportive relationships among teachers may be just as important as those of students.

Not only do teachers need to learn how to use cooperative learning procedures with students, but principals may need to learn how to structure relationships among teachers cooperatively.

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USING COOPERATIVE GROUPS IN THE TEACHER EDUCATION CLASSROOM

Preparing middle school teachers without allowing for interdisciplinary team planning is akin to teaching swimming without allowing the students to enter the water. Consequently, using cooperative groups in the middle level methods class is not an interesting alternative to the lecture format, it is essential to the basic preparation of prospective teachers. In a middle level methods class, cooperative learning serves two basic purposes. As in any other type of class, it can serve to teach fundamental concepts and processes. Beyond that, in a middle level methods class, cooperative grouping provides modeling for the type of teaching behavior that good middle grades teachers will be expected to demonstrate in their own classrooms.

According to Sharan (1980), cooperative team learning occurs in two basic formats: peer tutoring and group investigation. Peer tutoring is the method of choice when a teacher wants to reinforce basic information or basic skills in a subject. The tutoring sessions are highly structured by teacher inputs in the form of lectures, worksheets, study guides, or quizzes. Though students study together, they are individually held accountable for performing on some outcome measure such as a test. Some of the popular strategies that are used in classrooms today are sophisticated examples of peer tutoring. These include Student Teams-Achievement Divisions (STAD), Teams-Games-Tournaments (TGT), and Jigsaw II (Slavin, 1982).

Group investigation, on the other hand, is used to promote problem-solving, analysis, synthesis, or applications of knowledge to novel situations. Student information sources tend to be more varied, student discussion focuses more on interpretation of data and the exchange of ideas, and the final product is an interdependent one that is unique to each group.

THE ROLE OF GROUP INVESTIGATION

Much of the work in the middle level methods class at the University of Kansas is based on a seven-week group investigation culminating in the production of two-week interdisciplinary thematic units and group presentations to the class based on these units. In fact, more than one half of the grade that each student receives in the course is associated with this major cooperative group project. During the seventh week of the fifteen-week course, the class is divided by the teacher into three or four person teams based on attempting to balance the subject matter specialties of the students. Most often

social studies, English, science, and math are represented on the teams by different students.

In assigning the task of unit planning, the instructor provides a guide with suggestions for getting started, with seven team tasks to accomplish, with five individual tasks, and format specifications for the final product. The cooperative planning of these interdisciplinary thematic units is used to synthesize several topics taught in the course. These include Whitehead's "Cycle of Learning" (1963), research on middle grades teaching (Johnston & Markle, 1986), team organization (Erb & Doda, 1989), and cooperative learning itself (Slavin, 1982; Johnson, Johnson, Holubec, & Roy, 1984).

Once the cooperative groups are set up to plan their interdependent interdisciplinary units, three short-term cooperative group activities are carried out within this long-term activity. When the teams are first formed each student on the team responds to a personality characteristics inventory and shares the results with teammates. This cooperative activity is designed to help students get to know their teammates, appreciate the advantages of diversity when working in small groups, and becoming forewarned about possible future conflicts.

Soon thereafter, two peer tutoring activities are used to help team members understand and apply new learning to the teaming process. In one activity, the students read "What Team Organization Can Do for Teachers" (Erb, 1987) and discuss its content as a group in order to complete a study sheet that aims to clarify the advantages of team organization for teachers and to help students distinguish between "team teaching" and "team organization." The following week students are asked to master an understanding of using small groups in a multi-task classroom. To that end, they read two articles by Janet Kierstead (1985, 1986), discuss her concepts and procedures, and apply them to their own unit planning.

SETTING THE STAGE FOR COOPERATIVE LEARNING

It might be asked, how are the students prepared for this major cooperative group assignment? Long before the students are assigned to teams in the seventh week of class, they have already participated in four short-term cooperative group activities. In the second class session, the students are divided into pairs or threesomes in order to stimulate their recall of what it was like in junior high or middle school. By sharing experiences and brainstorming together, each student is enabled to come up with a richer mini-autobiography of the early adolescent years.

Early in the course, after teacher lectures on student characteristics and a second set of lectures on societal trends, the students are divided into groups of three or four to generate examples of the application of the information in the lectures to schooling. The material generated in the small groups is used as the basis for a whole-class discussion. But by having the students work in small groups to review their lecture notes and extend beyond the information to its application, student engagement with the subject matter is increased and enriched.

A fourth preliminary group activity is used when the concept of team organization is introduced to the class. After being exposed to the components of this concept, the students are divided into groups to brainstorm the possibilities inherent in this organizational pattern. Students piggy-back and build on each other's ideas. They experience one more example of the benefits of working in cooperative groups and on interdisciplinary teams.

It should be clear that using cooperative groups is a basic teaching strategy in the middle grades methods class. It is not just an experimental procedure. It is as important to teaching the course content as is teacher lecture, assigned readings, test taking, or report writing. It should also be apparent that cooperative groups, or student-centered learning, alternates with teacher lecture, or direct instruction. Sometimes lectures or readings are efficient means to transmit information from teacher/experts to students when that is appropriate. Other times, cooperative groups are needed to foster student comprehension of the ideas in lectures or readings; to promote students going beyond the basic facts to application, analysis, and synthesis; and, finally, to use knowledge in new, creative, and unique ways. Cooperative learning serves several purposes in a middle grades methods classroom. Without it students would have to learn in isolation, rather than as part of a social group. Though lectures and readings may be more efficient for covering large amounts of material, they are inadequate for promoting comprehension, cooperation, and competence among students. Effective instruction at the undergraduate level requires a carefully paced balance between teacher-led and student-directed instruction. Since teaching and learning is essentially a social activity, cooperative groups are as natural a part of academic classrooms as water is for swimming lessons or a flight simulator is for flying lessons.

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JIGSAW WITH MATURE STUDENTS

In my classes at the university, I have been using two variations of Jigsaw for many years. The most complete model brings students together in convenient-sized groups for cooperative learning. I prefer to use groups of three to five students. While groups of six or seven students may be necessary, they have a tendency to become unwieldy and provide too much opportunity for splintering into "off-task" behaviors.

Assume that you have a class of 20 students. They are to study a chapter or a section of content working from a set of common objectives or questions. Divide the class into teaching groups of four or five students or more. Give the teaching group members the objectives or questions. Each member of the teaching group will be given a specific objective or question for which only he/she will be responsible. Have the students number off according to the number of the objective or question assigned to them (or use some color/symbol coding) to identify the students for movement to the work groups. Ask all of the students with common elements (numbers, symbols, colors, etc.) to move to the location of the new group. This should result in one person from each of the original "teaching" groups being in each of the new "work" groups.

Make sure that the members in the work groups have correctly identified the objective (or tasks) on which you want them (but no other groups) to work. Their assignment is to work together and prepare the best responses to the objectives or questions of which they are capable in the limited time you give them. Each person must take his/her own notes and prepare to make his/her own report upon returning to the original "teaching" group. During this work group activity you may give (optional) two additional instructions. First, they should develop 3-5 questions to check for understanding of their explanation and second, they should develop a graphic (pictorial) model or representation to help their classmates remember and understand their explanation. I have found these optional assignments to be quite beneficial as they appeal to different learning styles.

After the time in the work group is finished and the "presentations" or explanations have been developed, the students leave the work groups and return to the original teaching groups. In the teaching groups they present the ideas, etc. which accomplish the objectives. They will offer their graphic representation (picture, chart, outline, diagram, etc.) and ask their prepared questions. If the classmates understand, the presenters are finished. If class-

mates do not understand, then the teachers may reteach or depend on group support to diagnose and clarify points for the students who did not understand at first.

After the teaching groups are finished with their presentations, it is possible to do one of several things depending on your overall objectives and the time remaining in your class. You can engage them generally in a whole class discussion of your objectives and directly related material in order to check understanding, retention in short-term memory, and their ability to transfer ideas to related concepts. You are also providing practice using the ideas (promoting long-term memory). At the next meeting of the class there should probably be a quick oral review or a short quiz to promote accountability and promote storage in long-term memory for the major test to come.

For hard-to-motivate groups, it is possible to offer bonus points to the original (teaching) groups if all students get 90 percent correct on the quiz over those objectives. Sometimes, with less mature students, the teacher may wish to give privileges or nonacademic rewards for successful group achievement. With mature students, the teacher may feel that a bonus is inappropriate and that the students should be motivated by the desire to do well on the next major exam. Sometimes, however, the offer of a little additional incentive will work wonders, even with a mature group.

A variation on the jigsaw model that has also been used successfully works with just a two-step design. It skips the first step in the first model and may result in less feeling of membership or cohesion in the small groups. With mature students such feelings of membership may not be as necessary to insure motivation and quality participation.

First divide the class into the number of work groups that will insure redistribution into teaching groups of reasonable size (3-5). Give each of these work groups (in step one) an objective or assignment and put them to work. Give them a time line for completion as you did the work groups in the first model. Remember that time limits are somewhat negotiable depending on the total time available. These groups can be given optional assignments to develop review questions and to develop some sort of graphic or visual presentation to make the lesson memorable.

When the work groups have completed their preparation, they are reassigned to new groups with one or more students from the original work groups assigned to each of the new groups. These new groups are the teaching or "exchange" groups. In these new groups ideas and information to fulfill the

objectives of the work groups are presented and clarified. Each member of the teaching/exchange group has the responsibility to challenge, clarify, and reteach for his/her own benefit and that of his group members. With the teaching groups in this model the teacher can also offer incentives, bonuses, or other rewards for exemplary work as the teacher deems necessary.

In both models, I recommend continuous teacher movement around the room during work and teaching group activity. The teacher is listening, challenging, explaining where needed and using proximity control to keep group members focused on the task at hand. Give clear explanations of the tasks to be performed and set short but reasonable guidelines for time distribution and limits.

In my classes, the membership of groups is mixed from assignment to assignment. One of my colleagues assigns students to teaching groups and they remain in those groups for two weeks or more. He saves time in step one and students develop some comraderie. I feel that I benefit from a continuous mix of ideas and perspectives.

Here is a final note about group size. Many groups do not divide evenly into the number or size of groups you wish. A group of 22 or 17 is hard to divide. Don't let problems with numbers become the barrier that keeps you from doing Jigsaw. Set a minimum number for both teaching and work groups. It is imperative that each teaching group have members from all of the different work groups. There is nothing wrong with two members of a teaching group having the same work group assignment (in fact it encourages cooperation which is one of the goals of Jigsaw). If, because of absence or illness, you are short a group member when it is time for his/her report from the work group, you have two options you can use immediately. Select someone from another group to give that information to both groups at the same time or simply give the short-handed teaching group the assignment to work together on that objective or question.

An area of concern for some teachers regarding the use of groups is the factor of timing. Groups will work at different rates so the teacher should expect to have a group or two who have completed their work while others are still "working" or "exchanging." You can solve this "problem" by being prepared with enrichment (related) activities, follow-on questions, and review assignments. If work groups are finishing early, have them use the time to do a rehearsal of their "teach."

Use of Jigsaw with university students yields sound results in both the area of achievement and retention of knowledge and in the area concerned with

motivation and affective development of students. It is a useful tool in the teacher's repertoire of teaching skills. Used well it can provide stimulation and variety while helping students understand and retain the lesson. I do not recommend it as a steady diet. Vary the classroom strategies with whole group instruction, media where it is appropriate, and a variety of different group strategies depending on your course objectives.

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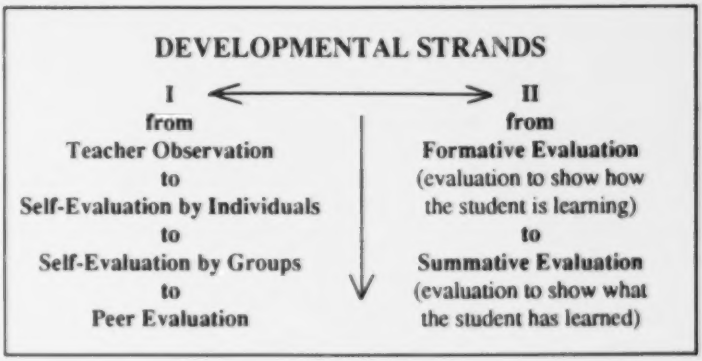
HOW DO YOU EVALUATE STUDENTS WORKING IN COOPERATIVE LEARNING GROUPS?

What strategies can we use? When should we use them?

In high schools, many questions about cooperative learning focus on evaluation. How can we be sure they are all working? How do we mark them? What about those who think such marks are unfair? As a result of our experiences and those of other teachers with whom we work, we offer the following sequence for evaluating students working in cooperative small groups:



The strands should be blended according to the nature of the task, the comfort levels of teachers and students and their readiness for additional risk-taking. Each successive level in both strands may include previous levels and involves increasing risk. Some classes can move from informal teacher observation to marks for working in groups very quickly. Other classes may never get to summative evaluation. In some school districts, group marks are not permitted.

Why self and peer evaluation?

Self and peer evaluation are important in cooperative learning. They do not replace more traditional evaluation, but place it in a broader context. Many students who do not do well in school are unskilled at monitoring their learning process. What do you do when you don't know what to do? This ability (called metacognition) needs to be developed if students are to

maximize their learning. Self and peer evaluation techniques combined with opportunities for students to talk about and reflect on their own learning experiences (under the guidance of an observant teacher) are important features in any lesson or series of lessons involving cooperative small group learning. Such reflection may take as little as thirty seconds. Too often students do not find out how they are doing until they get their mark for a piece of work. By then it is too late. Instead of learning from their mistakes, it's on to the next unit. Such evaluation should, of course, be consistent with sound principles.

What are some principles to follow in evaluation?

1. Whatever evaluation measures you use, they should be clearly linked to the stated objectives of the unit or course and based on specific criteria.

2. Such measures should be clear, precise, accurate and understandable to students.

3. Evaluation procedures should have student input where appropriate.

4. Evaluation needs to be seen as just. In cooperative learning, this can be challenging as students may balk at being assessed on their ability to work in a group. Yet, working with other people is part of life and is increasingly becoming so. Once they leave school, students are far more likely to have their job performance assessed through such measures as observation, self and peer evaluation than through a written exam.

5. On the other hand, teachers should ensure that both individuals and groups are accountable. Relying solely on a joint group mark may fail to recognize the distinctive contributions each student makes to the effort. It is this lack of individualization which students perceive as unfair. In many cases they are right.

6. Evaluation of student learning should assess both process and product.

7. Evaluation procedures should give students opportunities to gain feedback and reflect on their learning.

What are some practical strategies?

Evaluation, especially of the formative kind, can be carried out in several ways. Discussion and feedback are important and can be used to interpret observations and checklists such as those included at the end of this article.

The examples we have provided are ones which have worked for us with classes from grades 7 on. You should adapt them to your own needs according to specific criteria. If you have a computer, you can set up and change forms quite easily (as we have). Here are a few words of explanation regarding our samples.

The teacher's observation form is a simple one to start with. You can adapt it for student use since they should also practice their observation skills when they are ready for peer evaluation. The self-evaluation form included here can serve as a cumulative record for teacher and student to share. Teachers can offer periodic feedback to students as they record their own progress. The group performance form illustrates several ways for a group to assess its own work such as rating scales and anecdotal comments.

The combined group assessment form is quite advanced and should only be used when classes are ready for summative evaluation involving marks. It combines several forms of assessment and promotes individual accountability among group members.

Where do we go from here?

Evaluation is tough! This is in part because it is never objective. After all, it contains the word "value" and involves judging the worth of something. The suggestions we have provided only touch the issue. Try to be reflective and analytical in monitoring student progress. A certain amount of trial and error is necessary. No one learns if they don't make mistakes. On the other hand, don't take needless risks. Work with the class you think is most ready. Pick a time where you would feel inclined to have students do small group work anyway or where students might be motivated by some variety in teaching. Work with a trusted colleague to share your successes and concerns. Good luck.

We would like to acknowledge Susan Eadie, Educational Psychologist, Toronto Board of Education, for her suggestions.

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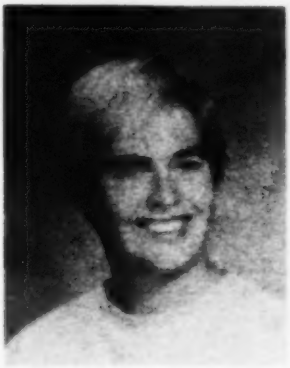

TEACHER'S GROUP OBSERVATION FORM

1. Keep a separate form for each group
2. Monitor only a few behaviors at a time
3. Provide positive rather than negative reinforcement during debriefing
4. You might try a key for each box as follows:

= NO EVIDENCE OF THE BEHAVIOR

= SOME EVIDENCE OF THE BEHAVIOR

= BEHAVIOR CLEARLY DEMONSTRATED

Student Name	BEHAVIORS			
	QUESTIONING	LISTENING	SHARING -IDEAS	NEGATIVE BEHAVIORS

YOUR GROUP'S PERFORMANCE

YES or NO

1. DIID YOU- identify clear goals? _____
   - make progress toward those goals? _____
   - share information and ideas? _____
   - make decisions based on the views of all? _____
   - listen well to each other? _____
   - encourage each other to participate? _____

2. CIRCLE THE WORD WHICH BEST REPRESENTS YOUR OVERALL PERFORMANCE AS A GROUP

   EXCELLENT PRETTY GOOD NEED TO DO BETTER

3. BRIEFLY STATE ONE THING WHICH HELPED YOUR GROUP TO WORK WELL

_____

_____

4. BRIEFLY STATE ONE THING WHICH WILL HELP YOUR GROUP TO WORK BETTER NEXT TIME

_____

_____

_____

5. HOW DID IT FEEL WORKING TOGETHER ON THIS ACTIVITY?

   FABULOUS - 1 2 3 4 5 - JUST AWFUL

6. HOW EASY WAS IT TO ANSWER THE PREVIOUS QUESTION?

   EASY - 1 2 3 4 5 - DIFFICULT

SELF-EVALUATION OF WORK IN GROUPS: A CUMULATIVE RECORD

Evaluate your performance in work groups according to the following scheme: ALWAYS = 2 SOMETIMES = 1 NEVER = 0

NAME																			
A I got started immediately																			
B I contributed my ideas																			
C I asked others for their ideas																			
D I helped others in the group learn																			
E I asked for help when I needed it																			
F I checked to make sure everyone in my group understood the work																			
G I encouraged others to participate																			
H I praised others for their ideas																			
I I stayed on topic																			
J I helped others stay on topic																			
MY TOTAL EVALUATION IS:																			

On the basis of this form complete the following

a) DATE-

b) My area of weakness is-

c) I plan to improve my area of weakness by-

AN EXAMPLE OF COMBINED GROUP ASSESSMENT

STEP 1 - If a group of 4 has been marked for a report, presentation, etc., the teacher may award an initial group mark based on criteria such as the following:

TEACHER'S CRITERIA FOR "TOTAL" MARKS	MARKS
1. CONTENT (e.g., relevance, organization, quality)	10
2. CLARITY (e.g., facts, presentation, accuracy)	10
3. TIME MANAGEMENT (e.g., preparation, presentation)	10
4. USE OF ORGANIZER/CHART (e.g., accuracy, clarity, suitability)	10
5. ANSWERING QUESTIONS (e.g., accuracy, clarity)	10
	TOTAL 50/5 x 4

In this example, the criteria total 50 marks, divided by 5 to obtain a maximum mark of 10 for each member of a group of 4. Thus, a report assessed an 80% score would result in a total group mark of 32 (8 marks for each member if the process ended here).

STEP 2 - If our group of 4 received a total of 32 marks, it is their task to divide that total score into 4 individual marks. This can happen in several ways. One approach follows:

STEP 3 - Each individual completes a self-evaluation form as outlined below:

INDIVIDUAL MEMBER'S ASSESSMENT AND MARKS

GROUP NUMBER ____ MEMBER NAME _____

TOPIC _____ TOTAL MARKS ASSIGNED FROM ABOVE - 32

SUGGESTED CRITERIA	MARKS
1. Co-operation	__/8
2. Contribution (work)	__/8
3. Contribution (ideas and organization)	__/8
4. Quality of work	__/8
5. Attendance	__/8
	TOTAL - __/40 / 4
	= __/10

In our example, the individual group member arrives at a total out of 40, divided by the number of members in the group for a mark out of 10.

STEP 4- The 4 group members compare self-evaluations and fill out the form below. The total number of marks for the individual members must not exceed the total number of marks awarded initially by the teacher- in this case **32**. Any discrepancies must be worked out by the group. For example, if all group members feel that they contributed roughly equally to the group product, then each would get **8** marks out of 10. The form below is handed in to the teacher who then records the marks.

NAME (SIGNITURE)	MARK	CONTRIBUTION(S) TO/ REASON(S) FOR MARK
1.		
2.		
3.		
4.		

TOTAL # OF MARKS ____ = TEACHER'S TOTAL ____

ALTERNATIVES- Students can help establish criteria for the teacher's initial evaluation and/or take the major responsibility for setting the criteria for peer and self evaluation. It is best to ease into this by getting students confortable with formative evaluation procedures using at first some, then more of the above steps.

- Teachers can turn over the entire mark to the students from which they can negotiate individual marks or s/he can turn over part of the mark in order to award groups which function well.

DISADVANTAGES- It takes some explanation, practice and time. Students must know the criteria for all evaluations.

- It is possible for an individual student in a poorly functioning group to achieve a higher mark (e.g. **9**) than students in our example above.

ADVANTAGES- Procedures such as the above combine teacher, self and peer evaluation in a way that involves both teachers and students in the evaluation process. Using this procedure can help students develop responsibility for their own learning.

Kansas ASCD Record

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